

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1. (Original) Seed of corn inbred line designated MN7224, representative seed of said line having been deposited under ATCC Accession No. PTA-5451.

Claim 2. (Original) A corn plant, or a part thererof, produced by growing the seed of claim 1.

Claim 3. (Original) The corn plant of claim 2, wherein said plant has been detasseled.

Claim 4. (Original) A tissue culture of regenerable cells produced from the plant of claim 2.

Claim 5. (Original) Protoplasts produced from the tissue culture of claim 4.

Claim 6. (Original) The tissue culture of claim 4, wherein cells of the tissue culture are from a tissue selected from the group consisting of leaf, pollen, embryo, root, root tip, anther, silk, flower, kernel, ear, cob, husk and stalk.

Claim 7. (Original) A corn plant regenerated from the tissue culture of claim 4, said plant having all the morphological and physiological characteristics of inbred line MN7224, representative seed of said line having been deposited under ATCC Accession No. PTA-5451.

Claim 8. (Original) A method for producing an F1 hybrid corn seed, comprising crossing the plant of claim 2 with a different corn plant and harvesting the resultant F1 hybrid corn seed.

Claim 9. (Original) A hybrid corn seed produced by the method of claim 8.

Claim 10. (Original) A hybrid corn plant, or parts thereof produced by growing said hybrid seed of claim 9.

Claim 11. (Original) A method for producing a male sterile corn plant comprising transforming the corn plant of claim 2 with a nucleic acid molecule that confers male sterility.

Claim 12. (Original) A male sterile corn plant produced by the method of claim 11.

Claim 13. (Original) A method of producing an herbicide resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers herbicide resistance.

Claim 14. (Original) An herbicide resistant corn plant produced by the method of claim 13.

Claim 15. (Original) The corn plant of claim 14, wherein the transgene confers resistance to an herbicide selected from the group consisting of: imidazolinone, sulfonylurea, glyphosate, glufosinate, L-phosphinothricin, triazine and benzonitrile.

Claim 16. (Original) A method of producing an insect resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers insect resistance.

Claim 17. (Original) An insect resistant corn plant produced by the method of claim 16.

Claim 18 (Original) The corn plant of claim 17, wherein the transgene encodes a *Bacillus thuringiensis* endotoxin.

Claim 19. (Original) A method of producing a disease resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers disease resistance.

Claim 20. (Original) A disease resistant corn plant produced by the method of claim 19.

Claim 21. (Original) A method of producing a corn plant with decreased phytate content comprising transforming the corn plant of claim 2 with a transgene encoding phytase.

Claim 22. (Original) A corn plant with decreased phytate content produced by the method of claim 21.

Claim 23. (Original) A method of producing a corn plant with modified fatty acid metabolism or modified carbohydrate metabolism comprising transforming the corn plant of claim 2 with a transgene encoding a protein selected from the group consisting of stearyl-ACP desaturase, fructosyltransferase, levansucrase, alpha-amylase, invertase and starch branching enzyme.

Claim 24. (Original) A corn plant produced by the method of claim 23.

Claim 25. (Original) The corn plant of claim 24 wherein the transgene confers a trait selected from the group consisting of waxy starch and increased amylose starch.

Claim 26. (Original) A corn plant, or part thereof, having all the physiological and morphological characteristics of the inbred line MN7224, representative seed of said line having been deposited under ATCC Accession No. PTA-5451.

Claim 27. (Original) A method of introducing a desired trait into corn inbred line MN7224 comprising:

- a) crossing MN7224 plants grown from MN7224 seed, representative seed of which has been deposited under ATCC Accession No. PTA-5451, with plants

of another corn line that comprise a desired trait to produce F1 progeny plants, wherein the desired trait is selected from the group consisting of male sterility, herbicide resistance, insect resistance, disease resistance and waxy starch;

- b) selecting F1 progeny plants that have the desired trait to produce selected F1 progeny plants;
- c) crossing the selected progeny plants with the MN7224 plants to produce backcross progeny plants;
- d) selecting for backcross progeny plants that have the desired trait and physiological and morphological characteristics of corn inbred line MN7224 listed in Table 1 to produce selected backcross progeny plants;

and

- e) repeating steps c) and d) three or more times in succession to produce selected fourth or higher backcross progeny plants that comprise the desired trait and all of the physiological and morphological characteristics of corn inbred line MN7224 listed in Table 1 as determined at the 5% significance level when grown in the same environmental conditions.

Claim 28. (Original) A plant produced by the method of claim 27, wherein the plant has the desired trait and all of the physiological and morphological characteristics of corn inbred line MN7224 listed in Table 1 as determined at the 5% significance level when grown in the same environmental conditions.

Claim 29. (Original) The plant of claim 28 wherein the desired trait is herbicide resistance and the resistance is conferred to an herbicide selected from the group consisting of: imidazolinone, sulfonylurea, glyphosate, glufosinate, L-phosphinothricin, triazine and benzonitrile.

Claim 30. (Original) The plant of claim 28 wherein the desired trait is insect resistance and the insect is conferred by a transgene encoding a *Bacillus thuringiensis* endotoxin.

Claim 31. (Original) The plant of claim 28 wherein the desired trait is male sterility and the trait is conferred by a cytoplasmic nucleic acid molecule that confers male sterility.

Claim 32. (Original) A method of modifying fatty acid metabolism, modified phytic acid metabolism or modified carbohydrate metabolism into corn inbred line MN7224 comprising:

- a) crossing MN7224 plants grown from MN7224 seed, representative seed of which has been deposited under ATCC Accession No. PTA-5451, with plants of another corn line that comprise a nucleic acid molecule encoding an enzyme selected from the group consisting of phytase, stearyl-ACP desaturase, fructosyltransferase, levansucrase, alpha-amylase, invertase and starch branching enzyme;
- b) selecting F1 progeny plants that have said nucleic acid molecule to produce selected F1 progeny plants;
- c) crossing the selected progeny plants with the MN7224 plants to produce backcross plants;
- d) selecting for backcross progeny plants that have said nucleic acid molecule and physiological and morphological characteristics of corn inbred line MN7224 listed in Table 1 to produce selected backcross progeny plants; and
- e) repeating steps c) and d) three or more times in succession to produce selected fourth or higher backcross progeny plants that comprise said nucleic acid molecule and have all of the physiological and morphological characteristics of corn inbred line MN7224 listed in Table 1 as determined at the 5% significance level when grown in the same environmental conditions.

Claim 33. (Original) A plant produced by the method of claim 32, wherein the plant comprises the nucleic acid molecule and has all of the physiological and morphological characteristics of corn inbred line MN7224 listed in Table 1 as determined at the 5% significance level when grown in the same environmental conditions.

Claim 34. (New) A hybrid corn seed produced by the method of claim 8, wherein the different corn plant is not a corn hybrid having the designation P724.

Claim 35. (New) A hybrid corn plant, or parts thereof, produced by growing said hybrid seed of claim 34.

Claim 36. (New) A hybrid corn seed produced by the method of claim 8, wherein the different corn plant is not a hybrid corn plant that imparts high oil concentration to resulting F1 grain when used as a pollinator.

Claim 37. (New) A hybrid corn plant, or parts thereof, produced by growing said hybrid seed of claim 36.

Claim 38. (New) Seed produced by selfing the plant of claim 2, wherein said seed produce plants having all the physiological and morphological characteristics of inbred corn line MN7224, representative seed of said line having been deposited under ATCC Accession No. PTA-5451.

Claim 39. (New) A method for producing a double-cross hybrid corn seed, comprising the steps of:

- a) crossing the inbred corn plant of claim 2 with a second inbred corn plant;
- b) harvesting resultant hybrid corn seed obtained from the cross in step a);
- c) crossing a third inbred corn plant with a fourth inbred corn plant;
- d) harvesting resultant hybrid corn seed obtained from the cross in step c);
- e) crossing corn plants grown from the harvested resultant hybrid corn seed obtained in step b) and corn plants grown from the harvested resultant hybrid seed obtained in step d); and,
- f) harvesting resultant double-cross hybrid seed.

Claim 40. (New) A method for producing a MN7224-derived corn plant, comprising:

- a) crossing inbred corn line MN7224, representative seed of said line having been deposited under ATCC accession number PTA-5451, with a second corn plant to yield progeny corn seed;
- b) growing said progeny corn seed, under plant growth conditions, to yield said MN7224-derived corn plant.

Claim 41. (New) The method of claim 35, further comprising:

- c) crossing said MN7224-derived corn plant with itself or another corn plant to yield additional MN7224-derived progeny corn seed;
- d) growing said progeny corn seed of step c) under plant growth conditions, to yield additional MN7224-derived corn plants; and
- e) repeating the crossing and growing steps of (c) and (d) from 0 to 7 times to generate further MN7224-derived corn plants.

Claim 42. (New) The method for producing a MN7224-derived corn plant of claim 35, wherein the second corn plant is from a different species than inbred corn line MN7224, and wherein the second corn plant is a member of the Graminaceae family.

Claim 43. (New) The method for producing a MN7224-derived corn plant of claim 35, wherein the second corn plant is from a different species than inbred corn line MN7224, and wherein the second corn plant is a member of a genera selected from the group consisting of Zea, Tripsacum, Croix, Schlerachne, Polytoca, Chlonachne of the tribe Maydeae.

Claim 44. (New) The method for producing a MN7224-derived corn plant of claim 19, wherein the second corn plant is from a different species than inbred corn line MN7224, and wherein the second corn plant is a variety of grain sorghum.